Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-06-17- 42** **Date: 06-07-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-07-19
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	04-07-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	298	298	6.0	94.0	90-100
3	10 mm	2645	2943	58.9	41.1	25-55
4	4.75 mm	1811	4754	95.1	4.9	0-10
5	Pan	246	5000	100	0	_

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-06-17- 42** **Date: 06-07-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	8.9	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.4	
3	Specific Gravity	2.62	_
4	Bulk Density(Loose) (Kg/l)	1.42	_
5	Bulk Density(Compacted) (Kg/l)	1.48	_
6	Water Absorption(%)	0.35	_
7	Aggregate crushing Value(%)	24.8	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	25.1	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

Note:

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-06-17- 42** **Date: 06-07-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).

Agency : Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097

Customer's Reference : BBMP/EE/BTP/WO/38/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 04-07-19

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 04-07-19

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-06-17- 42** **Date: 06-07-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Format No: CP/TF/01

TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID	:	**CP-2020-06-17- 42** **Date: 19-07-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-07-19
Sample Type/Size	:	Solid concrete blocks size (400X150X200)mm
Reference to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
Date of test	:	15-07-19

BLOCK DENSITY:

Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^6	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	400	149	198	11801	32.882	2786.4	2696.8	Not less than 1800Kg/m^3
2	404	150	201	12181	33.400	2742.1		
3	404	153	200	12362	31.671	2561.9		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		

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Lab ID : **CP-2020-06-17- 42** **Date: 19-07-19**

DIMENSION ANALYSIS

Sl.no	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
1	401	152	203	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
2	404	150	199	
3	403	151	199	
4	403	153	202	
5	400	149	199	
6	403	150	200	
7	399	151	199	
8	400	153	199	
9	401	149	201	
10	403	150	202	
11	400	149	203	
12	402	151	203	
13	402	149	201	
14	403	150	203	
15	401	152	199	
16	403	153	203	
17	400	150	200	
18	401	151	203	
19	402	153	201	
20	400	149	199	
Average of 20	**402**	**151**	**201**	

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Lab ID : **CP-2020-06-17- 42** **Date: 19-07-19**

COMPRESSIVE STRENGTH:

Sl. No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm^2)	(KN)	N/mm^2	(N/mm^2)
1	400	152	60636	282.5	4.7	4.7
2	404	150	60632	286.2	4.7	
3	403	151	60808	286.3	4.7	
4	403	153	61584	284.9	4.6	
5	400	149	59696	287.8	4.8	
6	403	150	60391	286.6	4.7	
7	399	151	60394	286.2	4.7	
8	400	153	61022	290.6	4.8	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	**Minimum average**	**Minimum Individual units.**
C (5.0)	5.00 N/mm^2	4.00 N/mm^2
C (4.0)	4.00 N/mm^2	3.20 N/mm^2

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-06-17- 42** **Date: 18/07/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).

Agency : Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097

Customer's Reference : BBMP/EE/BTP/WO/38/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 13-07-19

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 18/07/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	11/07/2019	18/07/2019	149.27 X 151.07 X 151.99	22550	**8.825**	288.4	12.8	12.6
2	PCC	M15	11/07/2019	18/07/2019	150.36 X 149.29 X 151.41	22447	**8.699**	275.4	12.3	
3	PCC	M15	11/07/2019	18/07/2019	151.97 X 150.81 X 150.73	22919	**8.615**	292.1	12.7	

Note:

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-06-17- 42** **Date: 08/08/2019**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).

Agency : Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097

Customer's Reference : BBMP/EE/BTP/WO/38/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 13-07-19

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 08/08/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	11/07/2019	08/08/2019	150.13 X 149.11 X 151.56	22385	**8.503**	392.8	17.5	17.8
2	PCC	M15	11/07/2019	08/08/2019	151.48 X 149.34 X 151.08	22621	**8.797**	405.9	17.9	
3	PCC	M15	11/07/2019	08/08/2019	151.17 X 151.23 X 151.10	22862	**8.837**	407.6	17.8	

Note:
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TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : **CP-2020-06-17- 42** **Date: 23-07-19**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).

Agency : Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097

Customer's Reference : BBMP/EE/BTP/WO/38/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 20-07-19

Sample Type : Fine Aggregate, M.Sand for Mortar

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2116-1980 (RA-2007) (Specification for Sand for Masonry Mortars)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 20-07-19

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	4.75 mm	0	0	0	100	100
2	2.36 mm	85	85	8.5	91.5	90-100
3	1.18 mm	200	285	28.5	71.5	70-100
4	600 micron	146	431	43.1	56.9	40-100
5	300 micron	116.5	547.5	54.8	45.3	5-70
6	150 micron	412.5	960	96.0	4.0	0-15
7	Pan	40	1000	100.0	0.0	0

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TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : **CP-2020-06-17- 42** **Date: 23-07-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	3.18	–
2	Specific Gravity	2.51	–
3	Material finer than 75 micron(%)	12.2	Crushed Fine aggregate Max 15%
4	*Compacted Bulk Density (Kg/litre)	1.90	–
5	*Loose Bulk Density (Kg/litre)	1.73	–

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TEST REPORT FOR PLASTER SAND

Lab ID	:	**CP-2020-06-17- 42** **Date: 24-07-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-07-19
Sample Type	:	Plaster Sand
Reference to BIS codes	:	IS: 383 : 2016 (Specification for Coarse and fine Aggregates) IS1542:1992 (Sand for Plaster - Specification) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	20-07-19
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	10 mm	0	0	0	100	100
2	4.75 mm	35	35	3.5	96.5	95-100
3	2.36 mm	15	50	5	95	95-100
4	1.18 mm	50	100	10	90	90-100
5	600 micron	100	200	20	80	80-100
6	300 micron	215	415	41.5	58.5	20-65
7	150 micron	500	915	91.5	8.5	0-15
8	Pan	85	1000	100	0	---

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-06-17- 42** **Date: 24-07-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.8	–
2	Specific Gravity	2.56	–
3	Material finer than 75 micron(%)	8.5	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

Note:
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TEST REPORT OF CERAMIC TILES

Lab ID	:	**CP-2020-06-17- 42** **Date: 01-08-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-07-19
Sample Type/ Size	:	Ceramic tiles (300X300)mm
Reference to BIS codes	:	IS 13630 (part 1) : 2006, IS 15622:2006
Date of test	:	25-07-19

MEASUREMENTS OF LENGTH, WIDTH AND THICKNESS

Number Of Specimen	Length measured at position 5mm from the corner		Breadth measured at position 5mm from the corner		Thickness measured at thickest part, 4 diagonal segment			
	1	2	1	2	1	2	3	4
1	300	300	300	300	6.04	6.01	6.08	6.04
2	300	300	300	300	6.01	6.07	6.01	6.01
3	300	300	300	300	6.03	6.05	6.06	6.03
4	300	300	300	300	6.06	6.05	6.08	6.06
5	300	300	300	300	6.08	6.06	6.05	6.08
6	300	300	300	300	6.03	6.07	6.07	6.07
7	300	300	300	300	6.08	6.05	6.08	6.07
8	300	300	300	300	6.02	6.05	6.04	6.05
9	300	300	300	300	6.04	6.04	6.02	6.04
10	300	300	300	300	6.04	6.01	6.05	6.04
Average	**300**		**300**		**6.05**			

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TEST REPORT OF CERAMIC TILES

WATER ABSORPTION

Sl.no	Weight of oven dry sample	Saturated weight of sample	Water absorption by mass	Average value of water absorption
1	1406	1455	3.49	2.85
2	1424	1464	2.81	
3	1464	1498	2.32	
4	1408	1454	3.27	
5	1434	1468	2.37	

MODULUS OF RUPTURE AND BREAKING STRENGTH

Sl.No

Sl.No.	Dimension (mm)			Wet Transverse Strength	Average
	L	B	T	(N/mm^2)	(N/mm^2)
1	300	300	6.04	14.8	14.66
2	300	300	6.06	14.2	
3	300	300	6.02	14.9	
4	300	300	6.06	14.8	
5	300	300	6.05	14.6	

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-06-17- 42** **Date: 08-07-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP,
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-07-19
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	05-07-19
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.76	–
2	Finess by Air permeablity method (m^2/kg,Min)	292.1	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.0%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R RUDRAPRASAD
Authorized Signatory
Technical Manager

Suvitha. N K
AE W10

****End of Report****

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-06-17- 42** **Date: 02-08-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-07-19
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	05-07-19
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

Note:
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Suvetha. N.L
AE W10

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R RUDRAPRASAD
Authorized Signatory
Technical Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-06-17- 42** **Date: 08-07-19**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).
Agency	:	Sri.C.Munireddy, No: 9, 4th Block, Doddabommasandra, Vidyaranyapura (P), Bangalore-560 097
Customer's Reference	:	BBMP/EE/BTP/WO/38/2019-20
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	04-07-19
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	04-07-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : **15000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	245	245	1.6	98.4	90-100
3	20 mm	7875	8120	54.1	45.9	30-70
4	10 mm	3899	12019	80.1	19.9	10-35
5	4.75 mm	2588	14607	97.4	2.6	0-5
6	Pan	393	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-06-17- 42** **Date: 08-07-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.9	
3	Specific Gravity	2.64	_
4	Bulk Density(Loose) (Kg/l)	1.38	_
5	Bulk Density(Compacted) (Kg/l)	1.45	_
6	Water Absorption(%)	0.22	_

Note:
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Authorized Signatory
Technical Manager

****End of Report****

Suvetha .N.K
AE W10

QC ABSTRACT

NAME OF WORK: Maintenance of Cremotorium, Burial Ground and office mainteinance in ward no 10 (Doddabommasandra).

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Block(400*150*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1
7	PCC(M15)	Compressive Strength(7days and 28days)	1 set /1-5 cum	1.96	2	2
8	CERAMIC TILES	MEASUREMENTS OF LENGTH, WIDTH AND THICKNESS	One Test		1	1
		MODULUS OF RUPTURE AND BREAKING STRENGTH	One Test		1	1

Sumathi. N.K
AE Ward 10

9	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
10	Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

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